

IN THE CLAIMS:

Please amend Claims 2, 14-17, 30 and 31 to read as follows.

1. (Canceled)

2. (Currently Amended) A method for producing electron-emitting devices[,] wired through matrix wirings comprising a plurality of row wirings and column wirings, each electron-emitting device including a pair of electrodes and an electroconductive film having an electron-emitting region, said electroconductive film being disposed between the pair of electrodes, wherein the electron-emitting regions of the electron-emitting devices are formed by a process including the steps of:

preparing electroconductive films; and

energizing said electroconductive films, while heating a substrate on which said electroconductive films are disposed at a temperature not higher than 150°C within an atmosphere comprising a gas for promoting cohesion of the electroconductive films,

wherein the step of energizing is performed by successively applying a phase shifted voltage pulse to the plurality of the row wirings.

3. (Previously Presented) The method according to Claim 2, wherein the gas for promoting the cohesion of the electroconductive films is a reducing gas.

4. (Previously Presented) The method according to Claim 2, wherein the gas for promoting cohesion of the electroconductive films is H₂, CO or CH₄.

5. (Previously Presented) The method according to Claim 2, wherein the gas for promoting the cohesion of the electroconductive films is H₂.

6. (Canceled)

7. (Previously Presented) The method according to Claim 2, wherein the heating of the substrate is carried out at a temperature not higher than 100 °C.

8. (Previously Presented) The method according to Claim 2, wherein the heating of the substrate is carried out at a temperature in the range of 50 °C to 100°C.

9. (Previously Presented) The method according to Claim 2, wherein each electroconductive film is formed through a step of dispensing a droplet containing a metallic compound onto a substrate.

10. (Original) The method according to Claim 9, wherein the dispensing of the droplet onto the substrate is carried out by an ink jet method.

11. (Previously Presented) The method according to Claim 2, wherein a material to be subjected to the heating and the energizing so as to be formulated into said electroconductive films comprises a metallic oxide.

12. (Original) The method according to Claim 11, wherein said metallic

oxide is palladium oxide.

13. (Previously Presented) The method according to Claim 2, wherein each electron-emitting device is a surface conduction electron-emitting device.

14. (Currently Amended) A method for producing an electron source comprising a plurality of electron-emitting devices[,] wired through matrix wirings comprising a plurality of row and column wirings, each electron-emitting device including a pair of electrodes and an electroconductive film having an electron-emitting region, said electroconductive film being disposed between the pair of electrodes, comprising the step[s] of:

forming said plurality of electron-emitting devices by a process including the steps of:

heating, at a temperature not higher than 150°C, a substrate on which a plurality of electroconductive films are disposed; and energizing said electroconductive films, wherein said steps of heating and energizing are conducted within an atmosphere comprising a gas for promoting cohesion of the electroconductive film, and wherein the step of energizing is performed by successively applying a phase shifted voltage pulse to the plurality of the row wirings.

15. (Currently Amended) A method for producing an image-forming apparatus comprising (a) an electron source comprising a plurality of electron-emitting

devices[,] wired through matrix wirings comprising a plurality of row wirings and column wirings, each electron-emitting device including a pair of electrodes and an electroconductive film having an electron-emitting region, said electroconductive film being disposed between the pair of electrodes, and (b) an image-forming member for forming an image under irradiation of electrons emitted from the electron source, the method comprising the step[s] of:

forming said plurality of electron-emitting devices by a process including the steps of:

heating, at a temperature of not higher than 150°C, a substrate on which a plurality of electroconductive films are disposed; and
energizing said electroconductive films,
wherein the steps of heating and energizing are conducted within an atmosphere comprising a gas for promoting cohesion of the electroconductive films, and
wherein the step of energizing is performed by successively applying
a phase shifted voltage pulse to the plurality of the row wirings.

16. (Currently Amended) A method for producing an electron source comprising a plurality of electron-emitting devices[,] wired through matrix wirings comprising a plurality of row wirings and column wirings, each electron-emitting device including a pair of electrodes and an electroconductive film having an electron-emitting region, said electroconductive film being disposed between the pair of electrodes, comprising the step[s] of:

forming said plurality of electron-emitting devices by a process including the steps of:

preparing a plurality of electroconductive films; and

energizing said electroconductive films, while heating a substrate on which said electroconductive films are disposed at a temperature of not higher than 150°C within an atmosphere comprising a gas for promoting cohesion of the electroconductive film,

wherein the step of energizing is performed by successively applying a phase shifted voltage pulse to the plurality of the row wirings.

17. (Currently Amended) A method for producing an image-forming apparatus comprising (a) an electron source comprising a plurality of electron-emitting devices[,] wired through matrix wirings comprising a plurality of row and column wirings, each electron-emitting device including a pair of electrodes and an electroconductive film having an electron-emitting region, said electroconductive film being disposed between the pair of electrodes, and (b) an image-forming member for forming an image under irradiation of electrons emitted from the electron source, the method comprising the step[s] of:

forming said plurality of electron-emitting devices by a process including the steps of:

preparing a plurality of electroconductive films; and

energizing said electroconductive films, while heating a substrate on which said electroconductive films are disposed at a temperature of not higher than 150°C

within an atmosphere comprising a gas for promoting cohesion of the electroconductive film, and

wherein the step of energizing is performed by successively applying a phase shifted voltage pulse to the plurality of the row wirings.

18. (Canceled)

19. (Canceled)

20. (Previously Presented) The method according to any one of Claims 14 to 17, wherein the gas for promoting the cohesion of the electroconductive film is a reducing gas.

21. (Previously Presented) The method according to any one of Claims 14 to 17, wherein the gas for promoting the cohesion of the electroconductive film is H₂, CO, or CH₄.

22. (Previously Presented) The method according to any one of Claims 14 to 17, wherein the gas for promoting the cohesion of the electroconductive film is H₂.

23. (Previously Presented) The method according to any one of Claims 14 to 17, wherein the heating of the substrate is carried out at a temperature of not more than approximately 100°C.

24. (Previously Presented) The method according to any one of Claims 14 to 17, wherein the heating of the substrate is carried out at a temperature in the range of 50°C to 100°C.

25. (Previously Presented) The method according to any one of Claims 14 to 17, further comprising the step of forming the electroconductive film by dispensing a droplet containing a metallic compound onto the substrate.

26. (Previously Presented) The method according to Claim 25, wherein the dispensing of the droplet onto the substrate is carried out by an ink jet method.

27. (Previously Presented) The method according to any one of Claims 14 to 17, wherein a material to be subjected to the heating and the energizing so as to be formulated into said electroconductive film comprises a metallic oxide.

28. (Previously Presented) The method according to Claim 27, wherein the metallic oxide is palladium oxide.

29. (Previously Presented) The method according to any one of Claims 14 to 17, wherein the electron-emitting device is a surface conduction electron-emitting device.

30. (Currently Amended) A method for producing an electron source comprising a plurality of electron-emitting devices[,] wired through matrix wirings comprising a plurality of row wirings and column wirings, each electron-emitting device including a pair of electrodes and an electroconductive film having an electron-emitting region, said electroconductive film being disposed between the pair of electrodes, comprising the steps of:

forming said plurality of electron-emitting devices by a process including the steps of:

preparing a plurality of electroconductive films; and
energizing said electroconductive films, while heating a substrate on which said electroconductive films are disposed within a predetermined atmosphere comprising a gas for promoting cohesion of the electroconductive films, wherein after the start of the energizing and the heating, the predetermined atmosphere including the gas for promoting the cohesion of the electroconductive films is formed, and
wherein the step of energizing is performed by successively applying
a phase shifted voltage pulse to the plurality of the row wirings.

31. (Currently Amended) A method for producing an image-forming apparatus comprising (a) an electron source comprising a plurality of electron-emitting devices[,] wired through matrix wirings comprising a plurality of row wirings and column wirings, each electron-emitting device including a pair of electrodes and an electroconductive film having an electron-emitting region, said electroconductive film being disposed between the pair of electrodes, and (b) an image-forming member for

forming an image under irradiation of electrons emitted from the electron source, the method comprising the step[s] of:

forming said plurality of electron-emitting devices by a process including the steps of:

preparing a plurality of electroconductive films; and
energizing said electroconductive films, while heating a substrate on which said electroconductive films are disposed within a predetermined atmosphere comprising a gas for promoting cohesion of the electroconductive films, wherein, after the start of the energizing and the heating, the predetermined atmosphere including the gas for promoting the cohesion of the electroconductive films is formed, and

wherein the step of energizing is performed by successively applying a phase shifted voltage pulse to the plurality of the row wirings.

32. (Previously Presented) The method according to Claim 30, wherein after the start of heating, the energizing starts.

33. (Previously Presented) The method according to Claim 31, wherein after the start of the heating, the energizing starts.

34. (Previously Presented) The method according to any one of Claims 30-33, wherein the heating of said substrate is conducted at a temperature of not higher than 150°C.

35. (Canceled)

36. (Previously Presented) The method according to any one of Claims 30-33, wherein the gas for promoting the cohesion of the electroconductive film is a reducing gas.

37. (Previously Presented) The method according to any one of Claims 30-33, wherein the gas for promoting cohesion of the electroconductive film is H₂, CO or CH₄.

38. (Previously Presented) The method according to any one of Claims 30-33, wherein the gas for promoting the cohesion of the electroconductive film is H₂.

39. (Canceled)

40. (Previously Presented) The method according to any one of Claims 30-33, wherein the heating of the substrate is carried out at a temperature not more than 100 °C.

41. (Previously Presented) The method according to any one of Claims 30-33, wherein the heating of said substrate is carried out at a temperature in the range of 50 °C to 100°C.

42. (Previously Presented) The method according to any one of Claims

30-33, wherein said electroconductive film is an electroconductive film formed through a step of dispensing a droplet containing a metallic compound onto a substrate.

43. (Previously Presented) The method according to Claim 42, wherein the dispensing of the droplet onto the substrate is carried out by an ink jet method.

44. (Previously Presented) The method according to any one of Claims 30-33, wherein said electroconductive film is an electroconductive film comprising a metallic oxide as a matrix.

45. (Previously Presented) The method according to Claim 44, wherein said metallic oxide is palladium oxide.

46. (Previously Presented) The method according to any one of Claims 30-33, wherein said electron-emitting device is a surface conduction electron-emitting device.

47. (Previously Presented) A method according to Claim 30 or 31, wherein the heating is conducted at a temperature of not higher than 150°C.